

## **IN THE CLAIMS**

**1.-14. (Cancelled).**

**15. (Currently Amended)** An optical amplifier comprising:

an input terminal receiving an optical input signal;

an optical coupler dividing the optical input signal into a first optical signal and a second optical signal;

an optical filter operatively connected to the optical coupler for passing the first optical input signal, and for ascertaining a level of the optical input signal through a detector; said detector being operatively connected to the optical filter for receiving the first optical signal passed through the optical filter to detect the level of the optical input signal; and

an optical fiber amplifier formed with erbium operatively connected to the optical coupler for amplifying the second optical signal with excitation by an exciting ~~light~~. light, the exciting light being located at an output side of the optical fiber amplifier.

**16. (Currently Amended)** An optical amplifier comprising:

an input terminal receiving an optical input signal;

an optical coupler dividing the optical input signal into a first optical signal and a second optical signal;

an optical filter operatively connected to the optical coupler for passing the first optical signal, blocking an exciting light, which exists along with the first optical signal, and for ascertaining a level of the optical input signal through a detector; said detector

being operatively connected to the optical filter for receiving the first optical signal passed through the optical filter to detect the level of the optical input signal; and

an optical fiber amplifier formed with erbium operatively connected to the optical coupler for amplifying the second optical signal with excitation by the exciting ~~light~~. light, the exciting light being located at an output side of the optical fiber amplifier.

**17. (Previously Presented)** The optical amplifier according to claim 16, wherein the optical filter blocks the exciting light, which exists along with the first optical signal input to the optical filter, to input to the detector.

**18. (Currently Amended)** An optical amplifier comprising:

an optical coupler receiving an optical signal, which includes an optical signal light and dividing the received optical light into first and second optical lights;

an optical filter operatively connected to the optical coupler for passing the optical signal light from the first optical light, and for ascertaining a level of the optical signal through a detector; said detector being operatively connected to the optical filter for receiving the optical signal light passed through the optical filter to detect the level of the optical signal; and

an optical fiber amplifier formed with erbium operatively connected to the optical coupler for amplifying the second optical light with excitation by an exciting ~~light~~. light, the exciting light being located at an output side of the optical fiber amplifier.

19. **(Previously Presented)** The optical amplifier according to claim 18,  
wherein the optical fiber amplifier is controlled to output an optical signal having  
a constant level.
20. **(New)** An optical amplifier comprising:  
an optical coupler dividing an input light into first and second lights;  
an optical filter filtering the first light divided by the optical coupler to output a  
filtered light;  
a detector operatively coupled to the optical filter detecting the filtered light; and  
an optical fiber amplifier doped with erbium, receiving from the optical coupler  
and amplifying the second light by an excitation light, which is located at an output side  
of the optical fiber amplifier.
21. **(New)** An optical amplifier comprising:  
an optical coupler dividing an input light into first and second lights;  
an optical filter filtering the first light divided by the optical coupler to output a  
filtered light;  
an optical fiber amplifier doped with erbium, receiving from the optical coupler  
and amplifying the second light by an excitation light, which is located at an output side  
of the optical fiber amplifier; and  
a detector coupled to the optical filter detecting the filtered light,  
wherein the excitation light is controlled according to the filtered light detected by  
the detector.